Biological Resources Technical Report

For the C-470 Corridor
Revised Environmental Assessment

June 2015

Submitted To:
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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

This report identifies existing biological resources present within the Colorado State Highway 470 (C-470) Revised Environmental Assessment (EA) Study Area located in the southwestern part of the Denver metropolitan area. C-470 is located about 13 miles south of downtown Denver. The project study area is located Arapahoe, Douglas, and Jefferson counties. Figure 1 shows the study area.

Figure 1
C-470 EA Study Corridor

The Federal Highway Administration (FHWA) and Colorado Department of Transportation (CDOT) have initiated the Revised EA for the 13.75-mile portion of C-470 between Kipling Parkway and Interstate 25 (I-25) to address congestion and delay, and to improve travel time reliability for C-470 users. The Proposed Action in the Revised EA differs slightly from the Express Lanes alternative identified in the previous EA that was approved by CDOT and FHWA in 2006. No Decision Document was obtained for the 2006 EA, and therefore the EA is being revised in 2015 for the C-470 Express Lanes Project.

This report has been prepared to ensure impacts to biological resources are determined in accordance with the following federal and state regulations:

- Endangered Species Act (ESA) – The ESA is administered by the US Fish and Wildlife Service (USFWS) and protects plant and wildlife species threatened with extinction.
- Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act – The USFWS administers these acts that protect migratory bird nesting habitat and active migratory bird and eagle nests.
- Waters of the U.S. including wetlands – The U.S. Army Corps of Engineers regulates jurisdictional waters under Section 404 of the Clean Water Act.

- Colorado Non-game, Endangered, and Threatened Species Conservation Act - Colorado Parks and Wildlife (CPW) is responsible for listing species of concern, threatened, and endangered within the state. This act provides some protection for state listed wildlife.
- CDOT 2009 Impacted Black-tailed Prairie Dog Policy - Work within the CDOT right-of-way that will impact black-tailed prairie dog colonies must follow these guidelines.
- Colorado Senate Bill 40 (SB 40) – CDOT is required to obtain certification from CPW when the agency plans construction in any stream, tributary, or stream bank. The certification identifies mitigation measures for working in these areas.
- Noxious Weeds – The Colorado Department of Agriculture (CDOA) Noxious Weed Act of 2003 (CRS 35-5-101; CRS 35-5.5-101; and Executive order D-006-99) identifies state designated noxious weeds and provides recommendations for managing noxious weeds.

1.1 Project Description - General

The existing C-470 freeway includes two general purpose lanes in each direction with a depressed median, resulting in a typical cross section approximately 110 feet wide. This width expands near grade-separated interchanges to include off-ramps, on-ramps, and in some cases, auxiliary lanes. In the No-Action Alternative, this configuration would remain unchanged, but would receive maintenance as needed to maintain the safety and functionality of the existing four-lane freeway.

In the more heavily travelled, eastern half of the project, the Proposed Action would add two tolled Express Lanes in each direction, expanding the four-lane freeway to an eight-lane freeway. To aid motorists in merging onto or off of the highway, auxiliary lanes will be provided between closely spaced interchanges (e.g., one mile apart). The typical cross-section will vary from 154 feet without auxiliary lanes to 174 feet in areas with auxiliary lanes.

In the less heavily travelled, western half of the project, the Proposed Action would add only one tolled Express Lane in each direction, but would be designed to accommodate an additional lane in the future. Westbound, the second toll lane would end at Lucent Boulevard, and the westbound single toll lane would end about one mile east of Kipling Boulevard. Eastbound, the first toll lane would begin east of Kipling. The second eastbound toll lane would begin in the vicinity of Broadway.

The Proposed Action includes no new interchanges and no major interchange modifications, except for the addition of two “direct-connect” ramps in the western half of the I-25/C-470 interchange. A new westbound ramp will enable exiting E-470 traffic to reach the rightmost westbound C-470 lane without having to merge across several lanes of through traffic. Then a new westbound lane will carry southbound and northbound I-25 traffic directly into the westbound C-470 express lane without having to merge across those same lanes. At the C-470/Santa Fe interchange, the westbound on-ramp would be modified.

1.2 Project Description – South Platte River Bridges Replacement

Various C-470 structures will be widened as part of the Proposed Action but the only bridges that will be completely replaced are the parallel C-470 eastbound and westbound bridges that cross the South Platte River. The C-470 crossing of the South Platte River is the most environmentally sensitive location along the project corridor as the bridges cross over riparian habitat connecting Chatfield State Park to the south with South Platte Park to the north. The river and its adjacent Mary Carter Greenway Trail provide an opportunity for wildlife and people to cross under C-470 at this location.

Figure 2
South Platte River Crossing Vicinity

C-470 at this location is located on an easement from the U.S. Army Corps of Engineers (USACE). For flood control purposes, USACE must have the ability to release large flows of water from the adjacent Chatfield Dam upstream (south of C-470). The design of the new bridges here must meet highway needs, USACE requirements, and other regulatory constraints pertaining to wetland and riparian areas, floodplains and water quality, while also considering trail and wildlife needs.

Following the discussion of various biological resources from a corridor-wide perspective in this Technical Memorandum, a focused discussion on this sensitive location is provided.

The C-470 crossing of the South Platte River is the most environmentally sensitive location along the project corridor, and also the location most constrained by various governmental regulations.

2.0 METHODS

The study area is defined as the area within the existing CDOT C-470 right-of-way between Kipling Boulevard and I-25. Study efforts included review of 2006 findings, an updated computer data search, and new field visits for the Revised EA. The desktop study and survey identified the following biological resources:

- Federal candidate, threatened, and endangered species, as identified by the USFWS Jefferson, Douglas, and Arapahoe Counties Species Lists and the online Information, Planning and Conservation (IPaC) System (USFWS 2015a).
- Colorado sensitive, threatened, and endangered species as identified on the CPW and Colorado Natural Heritage Program (CNHP) websites.
- Migratory bird habitat and nesting including raptors.
- Black-tailed prairie dog colonies.
- Wetlands and Waters of the United States, delineated in accordance with the *1987 U.S. Army Corps of Engineers Wetland Delineation Manual* and the *2010 Corps Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region* (Version 2.0) (USACE 2010).
- Noxious weeds occurring in the corridor were identified and locations of larger populations were presented in this document.
- SB 40 streams are identified.

This study used existing biological resource data collected for the 2006 C-470 EA. In addition, an initial desktop data collection process was initiated to review federal and state listed wildlife species and their habitats. The other biological resources addressed in this document were also reviewed in the desktop study using existing data from the 2006 C-470 EA and data from agencies. Subsequently, the Revised EA has been refined using newer data.

On July 12, 17, and 22, 2013, Robert Belford, Senior Biologist with Wilson & Company conducted a biological resources survey of the study corridor. All biological resource data collected in the field was recorded with a handheld GPS Unit that collects data to sub-meter accuracy. The weather during the field review was generally sunny with scattered afternoon clouds. Temperatures ranged from the upper 80s to middle 90s. No precipitation was present during the field review.

In December 2014, Mr. Belford made a follow-up visit to check for raptor nests while deciduous trees had no foliage.

3.0 BIOLOGICAL RESOURCES

This section identifies the results of the desktop and field survey for biological resources within the C-470 Study Area. A figure indicating the general location of identified biological resources along the corridor is provided in Figure 3.

The vegetation communities encountered in the study area included:

- The most common vegetation community was the roadside upland habitat that was dominated by crested wheatgrass (*Agropyron cristatum*), smooth brome (*Bromis inermis*), and cheat grass (*Bromis tectorum*).
- Short grass prairie was present in very isolated locations. The dominant plant species in these locations included yucca (*Yucca glauca*), blue grama (*Bouteloua gracilis*), and rabbitbrush (*Chrysothamnus spp*.).
- Scrub-shrub and emergent wetlands, and the riparian vegetation community are present along streams. Wetlands are dominated by sandbar willow (*Salix exigua*), cattail (*Typha spp*.), and various sedges and rushes. The riparian vegetation community is primarily comprised of plains cottonwood (*Populus deltoides*), narrow leaf cottonwood (*Populus angustifolia*), chokecherry (*Prunus virginiana*), and other herbaceous plants.

Impacts to the riparian and wetland communities along these streams are detailed in a separate Wetland Finding Report for the Revised EA. That report identified 41 wetland areas totaling 12.7 acres within the project area. The Proposed Action would have permanent impacts totaling 0.7 acre at 16 of these sites, and another 1.3 acres of temporary impacts at seven sites. CDOT will follow its policy of “no net loss” for wetlands, providing mitigation within the project area where appropriate, but may address some of these impacts using an offsite wetland mitigation bank. The report indicates that there would be no impacts to other waters of the United States.

3.1 Federal Candidate, Threatened, and Endangered Species

This section addresses the federal candidate, threatened, and endangered wildlife and plant species in Jefferson, Douglas, and Arapahoe counties. The USFWS online IPaC System was reviewed for each county to identify potential species that may occur in the study area. Species lists were reviewed to determine if suitable habitat was present within the study area to support federally listed species. Table 1 identifies the federal candidate, threatened, and endangered wildlife and plant species in Jefferson, Douglas, and Arapahoe counties. The table also provides narrative on the potential for each species to occur in the study area.

A total of 13 Federally listed species may occur in Jefferson County, 12 species in Douglas County, and 8 species in Arapahoe County (USFWS 2015b). Based on the review of habitat present within the C-470 Study Area, none of these species were determined to occur in the study area.

No Federal candidate, threatened or endangered species were found to occur in the C-470 study area.

Figure 3
General Location of Biological Resources along the C-470 Corridor

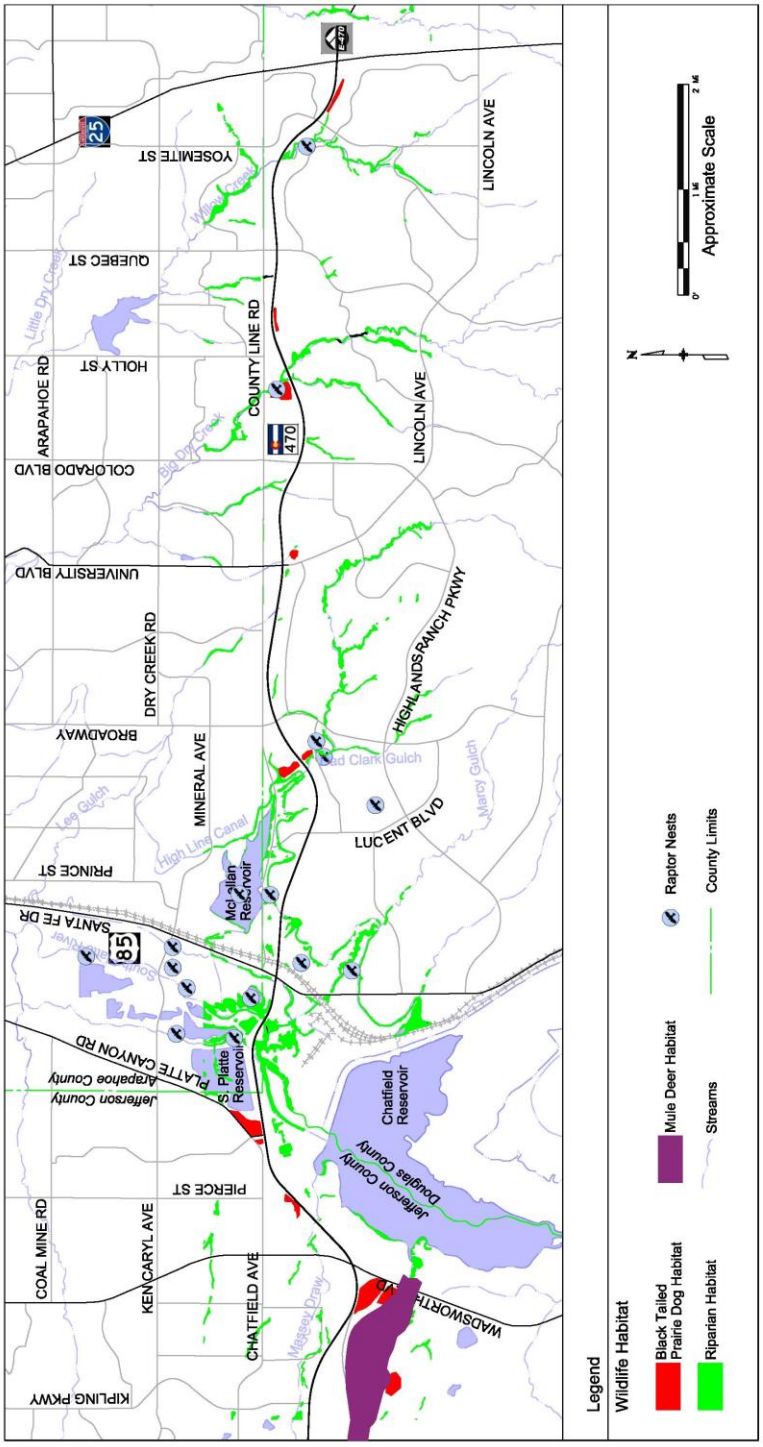


Table 1
Federal Listed Wildlife and Plant Species in Jefferson, Douglas, and Arapahoe Counties and their Potential to Occur in the C-470 Study Area

Species	Status	Counties	Habitat	Potential Occurrence in Study Area
Birds*				
Mexican Spotted Owl (*Strix occidentalis lucida*)	Threatened	Arapahoe, Douglas, Jefferson	Prefers mature conifer forests in the montane vegetation community.	No suitable habitat is present in the study area. The study area does not contain conifer forests with topography such as canyons for this avian species.
Least Tern (*Sternula antillarum*)	Endangered	Arapahoe, Douglas, Jefferson	Inhabits reservoirs, lakes, and rivers with sandy shorelines or islands.	No suitable habitat is present in the study area. This species is listed in the study area counties because it inhabits the middle Platte River and is included in the SPWRAP species recovery program.
Piping Plover (*Charadrius melodus*)	Endangered	Arapahoe, Douglas, Jefferson	Inhabits reservoirs, lakes, and river habitat with bare, non-vegetated shorelines.	No suitable habitat is present in the study area. This species is listed in the study area counties because it is included in the SPWRAP species recovery program.
Whooping Crane (*Grus americana*)	Endangered	Arapahoe, Jefferson, Douglas	Utilizes large wetlands, irrigated meadows, reservoirs, and river sandbars during the migration through the plains states.	No suitable habitat is present in the study area. This species is listed in the study area counties because it is included in the SPWRAP species recovery program.
Insects				
Pawnee montane skipper (*Hesperia leonardus montana*)	Threatened	Douglas, Jefferson	Occurs in the South Platte Canyon drainage systems. It prefers dry, open, ponderosa pine woodlands.	Suitable habitat for this species does not occur within the study area.
Fish				
Greenback cutthroat trout (*Oncorhynchus clarki ssp. stomias*)	Threatened	Douglas	Found in streams in the upper Arkansas and South Platte River drainages.	No suitable cold water stream habitat exists in study area.

Table 1, continued - Federal Listed Wildlife and Plant Species

Species	Status	Counties	Habitat	Potential Occurrence in Study Area
Fish (continued)				
Pallid sturgeon (*Scaphirhynchus albus*)	Endangered	Arapahoe, Douglas, Jefferson	Inhabits large river systems such as the Missouri River.	This fish species is not found in the study area. The closest documented occurrence of this species is the lower Platte River in Nebraska. This fish species is listed in the study area counties because it is included in the SPWRAP species recovery program.
Mammals				
Canada lynx (*Lynx canadensis*)	Threatened	Jefferson	Found in high elevation conifer forests.	No suitable habitat for the Canada lynx in the study area. The study area does not contain high-elevation conifer forests.
Preble's meadow jumping mouse (*Zapus hudsonius preblei*)	Threatened	Arapahoe, Douglas, Jefferson	Occurs along streams with adequate trees, shrubs, and herbaceous cover.	Unlikely to occur along the streams in the study area. All of the streams with the exception of a stretch of the South Platte River upstream from the C-470 Bridge are block-cleared. The short segment of the South Platte River in the vicinity of the C-470 Bridge has poor to marginal habitat for the mouse.
Plants				
Colorado butterfly plant (*Gaura neomexicana var. coloradensis*)	Threatened	Douglas, Jefferson	Stream channel sites that are occasionally disturbed, sub-irrigated alluvial soils along streams, and open floodplain meadows.	Unlikely to occur along study area streams due to dense vegetation present in riparian zones. The South Platte River downstream from the C-470 Bridge is block-cleared. The plant has never been documented in Douglas County and a small population exists at Chambers Preserve in Jefferson County. The population at Chambers Preserve was introduced from seed and transplants in the mid-1980s (USFWS 2010).
Ute ladies'-tresses orchid (*Spiranthes diluvialis*)	Threatened	Arapahoe, Douglas, Jefferson	This orchid prefers sub-irrigated alluvial soils along streams and open meadows in riparian corridors.	Unlikely to occur along study area streams due to dense vegetation present along riparian streams in study area. The South Platte River downstream from the C-470 Bridge has been block-cleared. The orchid is documented as occurring in Jefferson County. There are historic records of the orchid occurring in Douglas County and no records of the species occurring in Arapahoe County.
Western prairie fringed orchid (*Platanthera praeclara*)	Threatened	Arapahoe, Douglas, Jefferson	This orchid occurs in Nebraska and is addressed in this section because of the SPWRAP recovery program.	The SPWRAP discussion in Section 3.1.1 discusses the species recovery related to South Platte River depletions.

* The full common names of bird species are capitalized per American Ornithologists' Union standards.

3.1.1 South Platte River Depletions

Five species listed for each of the three study area counties were associated with the South Platte River Water Related Activities Program (SPWRAP). Actions undertaken in Colorado have the potential to affect these species many miles downstream, in Nebraska and other states. These species are:

- Interior Least Tern
- pallid sturgeon
- Piping Plover
- Whooping Crane
- western prairie fringed orchid

To address the effects that any depletion would have on federally-listed species downstream that depend on the river for their survival, CDOT, as a state agency, is participating in the South Platte Water Related Activities Program (SPWRAP). CDOT is cooperating with FHWA which provides a federal nexus for the project. In response to the need for formal consultation for water used from the South Platte basin, FHWA has prepared a Programmatic Biological Assessment (PBA) that will estimate total water usage from 2012 until 2019. The PBA addresses the five species noted above. Any water used for this project will be reported to the USFWS at the year's end after the completion of the project as per the aforementioned consultation. Effects to species not addressed in the PBA, or affected by causes other than water depletions to the South Platte, have been analyzed separately.

3.1.2 Changes to the Preble's Meadow Jumping Mouse, Ute ladies'-Tresses Orchid, and Colorado Butterfly Plant Block-Clearance Zone since the 2006 C-470 EA

Changes have occurred to the Preble's meadow jumping mouse, Ute ladies' tresses orchid, and Colorado butterfly plant block-clearance zones since the 2006 C-470 EA was completed. The 2005 C-470 T&E Technical Memorandum identified potential Preble's meadow jumping mouse habitat in the South Platte River below Chatfield Reservoir dam, Big Dry Creek, and Willow Creek. These stream segments were not block-cleared at the time the 2006 EA was published. While the technical memorandum had identified these stream segments as potential habitat, the2005 study did not include a presence/absence survey for the Preble's meadow jumping mouse. Therefore, this species was never confirmed as present along these streams.

In 2010, the USFWS designated Preble's meadow jumping mouse block-clearance for the South Platte River downstream from the C-470 Bridge, Big Dry Creek, and Willow Creek. This only leaves the South Platte River upstream from the C-470 Bridge as the study area stream segment not block-cleared.

The 2005 Technical Report and 2006 EA also addressed the habitat conditions for the Ute ladies' tresses orchid and Colorado butterfly plant within the study area. The Technical Report addressed habitat for these species along the South Platte River and stated the vegetation was dense and not appropriate for the presence of these species (ERO 2005). Other streams along the corridor were not addressed in the report. In

2006, the South Platte River was not block-cleared for these species. That status changed in 2008 when the USFWS designated block-clearance for these two plant species on the South Platte River downstream from the C-470 Bridge.

3.1.3 Current Status of Preble's Meadow Jumping Mouse, Ute ladies'-Tresses Orchid, and Colorado Butterfly Plant for Revised C-470 EA

The 2015 biological survey looked at habitat conditions for the Preble's meadow jumping mouse, Ute ladies'-tresses orchid, and Colorado butterfly plant on the upstream side of the C-470 parallel bridges over the South Platte and determined the habitat had not changed since the 2005 C-470 EA Biological Study had been completed. The riparian habitat in this location is impacted by the bridge, the recreational trail on the west side of the river, and bridge support materials on the east side of the river. Both sides of the river at the C-470 bridges have narrow strips of riparian vegetation consisting of willow and other herbaceous plants. Therefore, this site does not contain the habitat conducive to Preble's meadow jumping mouse, Ute ladies'- tresses orchid, and Colorado butterfly plant occupancy.

In 2005, the USFWS concurred that the C-470 Project was not likely to adversely affect these three species. Since the habitat has not changed since 2005, block-cleared areas for these species has been expanded, and the project preferred alternative has been proposed that will limit roadway improvements to an area within the CDOT right-of-way, the USFWS has again concurred the project was not likely to adversely affect the Preble's meadow jumping mouse, Ute ladies'-tresses orchid, and Colorado butterfly plant. The USFWS concurrence correspondence dated June 15, 2015 is found in Appendix A.

3.2 State-Listed Species

This section identifies state-listed species that have the potential to occur in Jefferson, Douglas, and Arapahoe counties. The CPW has listed 74 species of amphibians, birds, fish, mammals, reptiles, and mollusks as endangered, threatened, or of special concern. This section will only identify the 11 state listed threatened and endangered species potentially occurring within the study area counties. The CPW Natural Diversity Information System and CNHP data were reviewed to identify species ranges in the three study area counties, Arapahoe, Douglas and Jefferson.

The distribution and habitat preferences of each state-listed species were identified and the potential for each of these species to occur in the study area is identified in Table 2. The study area has 11 state listed birds, fish, and mammal species that potentially occur in the study area counties (CPW 2013).

Table 2
State-Listed Species Potentially Occurring in Jefferson, Douglas, and Arapahoe Counties and their Potential to Occur in the C-470 Study Area

Species	Status	Counties	Habitat	Potential Occurrence in Study Area
Birds				
Burrowing Owl (*Athene cunicularia*)	State Threatened	Arapahoe, Douglas, Jefferson	Prairie dog colonies are primarily used by the owl for nesting and hunting. The owl is a migrant that can arrive in March and is typically migrating south by October.	Potential to occur in study area because black-tailed prairie dog colonies are present.
Mexican Spotted Owl (*Strix occidentalis lucida*)	State Threatened	Arapahoe, Douglas, Jefferson	Described in Table 3-1 because it is also Federally listed.	No suitable nesting habitat in the study area. Was discussed in Table 1 because it is also Federally listed.
Plains Sharp-tailed Grouse (*Tympanuchus phasianellus jamesii*)	State Endangered	Douglas	Occurs in shrublands and will use croplands and riparian corridors during the winter months.	No suitable habitat present in the study area.
American Peregrine Falcon (*Falco peregrinus anatum*)	State Species of Concern	Arapahoe, Douglas, Jefferson	Requires rocky outcrops for nesting. Uses a variety of habitats during the spring and fall migration.	Could use the study area during migration. However, there is no suitable nesting habitat in the study area.
Mountain Plover (*Charadrius montanus*)	State Species of Concern	Arapahoe, Douglas, Jefferson	Requires open grassland for nesting. Will use other habitats during the migration in the spring and fall.	No suitable nesting habitat in the study area. Could use parts of the study area during migration.
Fish				
Common shiner (*Luxilus cornutus*)	State Threatened	Arapahoe, Douglas	Prefers warm water streams and rivers. Primarily found in the South Platte River and its tributaries in eastern Colorado.	Potential to occur in the study area. Has been documented as occurring in West Plum Creek in Douglas County (NDI 2013).
Northern redbelly dace (*Phoxinus eos*)	State Endangered	Arapahoe, Douglas	Native to the South Platte River Basin. The fish requires slow moving streams and cold water temperatures.	Potential to occur in the study area. Has recently been found in the Plum Creek drainage in Douglas County.
Mammals				
Canada lynx (*Lynx canadensis*)	State Endangered	Jefferson	Described in Table 3-1 because it is also Federally listed.	Discussed in Table 3-1 because it is also Federally listed.
Preble's meadow jumping mouse (*Zapus hudsonius preblei*)	State Threatened	Arapahoe, Douglas, Jefferson	Described in Table 3-1 because it is also Federally listed.	Discussed in Table 3-1 because it is also Federally listed.
Black-tailed prairie dog (*Cynomys leucurus*)	State Species of Concern	Arapahoe, Douglas, Jefferson	Grassland habitat.	Numerous black-tailed prairie dog colonies are present adjacent to C-470 within the study area.

Table 2 (continued)
State-Listed Species Potentially Occurring in Jefferson, Douglas, and Arapahoe Counties and their Potential to Occur in the C-470 Study Area

Species	Status	Counties	Habitat	Potential Occurrence in Study Area
Mammals (continued)				
Northern pocket gopher (*Thomomys talpoides macrotis*)	State Species of Concern	Douglas	Occupies many different habitats, including agricultural areas, grasslands, shrub-lands, and high-elevation meadows.	Potential habitat for the species is present in the study area.

The black-tailed prairie dog is present in the C-470 study area. Six other state-listed species may occur in the area: three bird species, two fish species and the northern pocket gopher.

A total of seven state-listed species potentially occur in the study area. Of the avian species identified as potentially occurring in the study area, the Burrowing Owl is the only species that could nest in study area prairie dog colonies. However, no Burrowing Owls were observed in the prairie dog colonies during the biological survey. Of note, a Burrowing Owl survey using the CPW Guidelines was not completed for this biological assessment. The mitigation section will address the requirement for additional Burrowing Owl surveys as the project progresses. The other two avian species, American Peregrine Falcon and Mountain Plover, may use the study area for short periods during the spring and fall migrations. The two fish species, the common shiner and northern redbelly dace, may occur in the South Platte River, Big Dry Creek, and Willow Creek. The black-tailed prairie dog is present in the study area. The northern pocket gopher could inhabit some of the open grasslands in the study area.

3.3 Migratory Birds, Including Raptors

Migratory birds as well as their eggs and nests are protected under the Migratory Bird Treaty Act (MBTA). With the exception of House Sparrow, Rock Dove (Common or Feral Pigeon), European Starling, and resident game birds such as Pheasant and Grouse, all wild birds commonly found in the U.S. are protected by the MBTA, even species such as Magpie and Great Horned Owl that tend to be present throughout the year. All active nests are protected, including cavity nests (e.g., Flicker), ground nests (e.g. Killdeer), and subterranean nests (e.g., Burrowing Owl).

The MBTA does not contain any prohibition that applies to the destruction of an inactive bird nest alone (without birds or eggs), provided that no possession occurs during the destruction. While destruction of an inactive nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs is illegal and fully prosecutable under the MBTA (Migratory Bird Permit Memorandum, U.S. Fish and Wildlife April 15, 2003).

Migratory bird nesting habitat is available along riparian corridors and some remaining grassland along the entire length of the C-470 study area. The western end of the project as the corridor passes through the Chatfield Reservoir State Recreation Area

contains the best habitat for nesting migratory birds along the South Platte River and the grasslands within the area. This portion of the corridor contains the highest quality habitat for grassland-dependent nesting migratory birds.

Swallow nests were observed during the field review at the Erickson Boulevard Bridge, C-470 Bridge over the South Platte River, and the C-470 Bridge over Willow Creek. Figure 4 shows the swallow nests at the Erickson Boulevard Bridge. The protocol for surveying bridges for swallow nesting sites will be addressed in the migratory bird mitigation commitments.

Figure 4
Swallow Nests on the C-470 Bridge over Erickson Boulevard

Note: Photo taken from north of C-470, facing southward. Bridge shown carries westbound C-470 traffic. (Wilson & Company, August 2013)

Birds of prey, also known as raptors, hunt vertebrates, including other birds, and invertebrates for food. Eagles and hawks are well known examples, but many other species are also considered raptors. Raptors have three distinguishing characteristics: a hooked beak, excellent long-range vision, and strong feet with sharp talons. An important conservation approach for these birds is to avoid disturbances to raptor nesting activities, which can mean restricting construction activity within proximity of an active nest during the nesting season.

An extensive field survey for raptor nests was conducted in August 2003, followed by limited spot checks in 2013 and 2014. The 2003 effort determined that raptor nests were present in the project area, specifically including four active Red-Tailed Hawk nests located within one-third of a mile from C-470. This is the buffer zone radius within

which Colorado Parks and Wildlife recommends temporal restrictions on construction activities to minimize disruptions to active nests. The Red-Tailed Hawk is the most common raptor species in America, according to the U.S. Fish and Wildlife Service.

The four active Red-Tailed Hawk nest from the 2003 field survey were located along Big Dry Creek, Willow Creek, and (two) the southeastern corner of the C-470/Santa Fe Drive interchange. Since then, major development has occurred in the vicinity of this interchange, including construction of a major retirement community (Windcrest) complex and construction of the southbound Santa Fe Drive flyover ramp to eastbound C-470, as well as establishment of a former gravel pit as a small local park ("Johnny's Pond), attracting more human foot traffic to the area.

Other nests observed in the original field survey were inactive or were located beyond a half mile distant from C-470. Within a full mile from C-470, other raptors had been observed including one Prairie Falcon nest and another nest previously productive for the Great Horned Owl. The 2006 EA reported that the riparian canopy near the Highline Canal is known to be a winter perch site for the Bald Eagle. Additionally, an unconfirmed report from a citizen in 2006 noted the presence of a nesting pair of Kestrels in the Herrick Dale neighborhood of Littleton.

Numerous raptors are listed on the bird-watching checklists developed by Chatfield State Park and by the South Platte River Park which abut C-470 at its South Platte River crossing. Chatfield State Park includes Chatfield Reservoir and South Platte Park includes numerous lakes as well as riparian area. Additionally, the continued presence of prairie dog colonies along C-470 provides a source of prey between the riparian areas.

Spot checks performed in 2013 and 2014 confirmed continued presence of recently active raptor nests within the project area, likely to be occupied in spring for the start of the nesting season. The purpose of the visits was not to complete an updated inventory, but to confirm that conditions in the area remain conducive for raptor presence. Based on these observations, it should be assumed that active raptor nests will be present along the corridor, especially near riparian areas, consistent with past findings.

The mitigation commitments for migratory birds will outline the protocol for raptor nest surveys to be completed as the project progresses; including the commitment to conduct raptor nest surveys.

3.4 Black-tailed Prairie Dogs

Black-tailed prairie dog colonies are present throughout the study area. The 2005 C-470 Biological Technical Report mapped a total of 21 colonies that encompassed 90 acres (ERO 2005). The 2013 survey used the 2005 prairie dog mapping and visited all sites located within the CDOT right-of-way to verify the current status of the colonies. A total of 20 colonies were present in the CDOT right-of-way. All of the

20 active colonies of black-tailed prairie dogs are present along C-470 in the study area.

colonies identified in 2005 within the CDOT right-of-way were active, except for one near University Boulevard. Based on the 2005 mapping, most of the colonies appear to be approximately the same size. No appreciable increase or decrease in colony size was noted in the field review. In addition, no additional new colonies were observed during the 2013 biological survey. The mitigation section will address project adherence with the *CDOT 2009 Impacted Black-tailed Prairie Dog Policy* (CDOT 2009).

3.5 Common Wildlife

Wildlife habitat in the study area is generally located along the undeveloped stream corridors that cross C-470, and the open grasslands and shrublands that are found in the western portion of the study area. Most of the species likely to be found in the study are well-adapted to human modified habitat and human disturbance. Common mammals in these areas include mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), cottontail rabbit (*Sylvilagus audubonii*), deer mouse (*Peromyscus maniculatus*), and striped skunk (*Mephitis mephitis*).

Most of the stream crossings along C-470 also serve as wildlife corridors across the highway. The most significant wildlife corridors are along the South Platte River and Big Dry Creek, where highway bridges allow for wildlife passage underneath. Other wildlife crossings include Willow Creek, Dad Clark Gulch, and the Highline Canal, where box culverts allow for some wildlife movement. Any habitat impacts, especially riparian and wetland habitat impacts, would adversely affect the wildlife species that depend on them.

3.5.1 Mule Deer and Elk

Mule deer (*Odocoileus hemionus*) are common in shrublands on rough, broken terrain that provides abundant browse and cover. Mule deer are likely to occur in and near the western portions of the corridor, especially in the South Platte River floodplain and west of the river to the foothills beyond Kipling Parkway (outside of the C-470 study area).

American elk (*Cervus elaphus*) are commonly found in semi-open forest or along forest edges above 6,000 feet. Elk are known to migrate through the Chatfield Basin to the southwest of the corridor and along the Dakota hogback to the west of the study area, and may occasionally venture into the corridor, particularly in the winter.

The existing C-470 highway poses a substantial barrier to movement by both of these species. Mule deer are likely to use the South Platte River and Big Dry Creek bridges as movement corridors, while the likelihood of elk crossing C-470 to the north and east is very small due to the absence of suitable habitat in the urbanized areas. Although the South Platte River bridge is likely a major movement corridor, it provides little room for wildlife movement along the river banks due to the existing trail and riprap. Mule deer also may occasionally cross the C-470 roadway surface during low traffic periods.

The C-470 Proposed Action would cause the direct disturbance or loss of habitat areas for mule deer or elk because of the larger footprint of the proposed roadway and its

associated facilities. Most impacts would be to relatively low quality habitat in the median and in mowed areas of existing highway right-of-way. Some higher quality habitat would be lost in areas where the right-of-way would be expanded into currently undeveloped areas. In addition to direct impacts to habitat, increased noise and traffic volumes would enlarge the area around the highway that mule deer and elk would likely avoid. This would effectively reduce the amount habitat used by deer and elk. A benefit of transportation improvements would be reconstruction of the existing bridge over the South Platte River. The reconstructed bridge would improve the movement corridor between Chatfield State Park and South Platte Park. Movement at other crossings would not be improved.

3.5.2 Vehicle-Wildlife Crashes

CDOT's Traffic Safety Branch provided a listing of 2,311 reported crashes along a 13-mile stretch of C-470 from Kipling to Interstate 25 for the five-year period of 2008 to 2012, inclusive. This equates to an average of 462 crashes per year for the corridor, or 1.27 crashes per day along this 13-mile segment. Only 29 (1.2%) of the reported 2,311 crashes involved a wild animal. About 70% of these crashes (21 of 29) involved deer.

Over the five-year period, the total of 29 vehicle-wildlife crashes reported along C-470 equates to an average of just under six crashes per year. As noted above other crashes went unreported. Undoubtedly there were also numerous near misses. Out of the 29 total crashes, 21 (nearly 70%) occurred in the western half of the 13-mile corridor. The western half is less densely developed, with large parcels of adjacent park lands, and it includes the South Platte River.

Seven vehicle-wildlife crashes were reported along the 13-mile C-470 project area during 2012. There has been no clear trend in the number of such crashes between 2008 and 2012.

The 2006 C-470 Environmental Assessment identified five known wildlife crossing areas along C-470, in the vicinity of the following drainages, listed from west to east:

- Massey Draw (approximately C-470 milepost 14.1)
- South Platte River (MP 16.5)
- Highline Canal (MP 17.6)
- Big Dry Creek (MP23.0)
- Willow Creek (MP 25.1)

During the 2008-2012 reporting period, eight vehicle wildlife crashes (1.6 per year) occurred generally near the South Platte River (between Platte Canyon Drive and Santa Fe Drive), in an area bordered to the south by Chatfield State Park and to the north by South Platte Park.

Another three crashes occurred near Massey Draw, and two crashes occurred near Big Dry Creek. There were no vehicle-wildlife crashes near the Highline Canal or Willow Creek. Another 16 vehicle-wildlife crashes occurred elsewhere along the corridor, not at the five identified crossing areas.

The CDOT records include a wide range of data including the date, time, lighting conditions, and other data regarding each crash. A review of these records yielded the

summary information provided in Table 3. The number and geographic concentration of the observed vehicle-wildlife crashes along C-470 during 2008 to 2012 are not indicative of localized roadway deficiencies that would need to be addressed in the design of the Proposed Action. Nevertheless, it is desirable to minimize the number of these incidents through design and operational features as practicable.

Table 3
Reported C-470 Vehicle-Wildlife Crashes Summary

Detail	Summary of 29 Total Crashes Over Five Years
Species	Deer - 21 crashes; elk - 3; coyote - 2; owl – 1; unknown - 2.
Yearly Trend	No trend is evident in the number of total crashes by year (most recently, 7 in 2012).
Season	Totals by calendar quarter show more crashes in the latter part of the year.
Time of Day	Two-thirds of the crashes (20 of 29) occurred overnight, between the hours of 7pm and 6am.
Lighting	19 of the 29 crashes happened during conditions of darkness, 16 of these in unlighted areas.
Vehicle Speed	24 crashes involved vehicles traveling at least 60 miles per hour (mph); 4 crashes at 50 to 55 mph; 1 crash reported at 20 mph.
Other Factors	Bad weather and driver impairment were not contributing factors. Only one crash out of 29 occurred during bad weather conditions.
Outcomes	All 29 crashes resulted in vehicle damage; 2 of the crashes resulted in human injury, with no fatalities. The records do not indicate injury or fatality outcomes for the animals involved.

3.6 Noxious Weeds

In summer 2013, the study area was surveyed for all noxious weeds listed on the Colorado Department of Agriculture (CDOA) Noxious Weed List, CDOT Maintenance Noxious Weed List, and the respective noxious weed lists maintained by Jefferson and Douglas counties (Jefferson and Douglas Counties 2013). Arapahoe County does not have its own county noxious weed list. Eight species of noxious weeds were observed in the study area, as listed in Table 4.

Table 4 identifies the noxious weed species observed in the corridor field survey and lists the CDOA, and county designation for each. CDOA designates noxious weed species in three categories (Lists A, B, and C), depending on their potential adverse impacts and their degree of spreading to date:

- List A species are targeted for eradication.
- List B species are managed to curtail spreading and expansion of local populations.
- List C species do not require management actions, but are listed because they can be a problem and local management actions may be required.

Table 4
Noxious Weeds Present in the Study Area

Common Name	Species Name	CDOA Noxious Weed Lists	Douglas County List	Jefferson County List
Canada thistle	*Cirsium arvens*	List B	x	x
Diffuse knapweed	*Centaurea diffusa*	List B	x	x
Field bindweed	*Convolvulus arvensis*	List C	--	--
Leafy spurge	*Euphorbia esula*	List B	x	x
Musk thistle	*Cardus nutans*	List B	x	x
Russian olive	*Elaeagnus angustifolia*	List B	x	x
Salt cedar	*Tamarix ramosissima*	List B	x	x
Scotch thistle	*Onopordum tauricum*	List B	x	x

x indicates that the species is included on the CDOT or county list.

Noxious weeds were generally observed and scattered throughout the study area. Moderate to larger populations of noxious weeds were observed at the following locations along the corridor:

- Along Massey Draw and the South Platte River, Russian Olive is present within and adjacent to riparian habitat.
- Upland areas in the Chatfield State Recreation Area have low populations of diffuse knapweed, Canada thistle, and musk thistle.
- On the south side of Big Dry Creek in the upland areas within the CDOT right-of-way, a mix of diffuse knapweed, leafy spurge, musk thistle, and Scotch thistle was observed.
- Within upland sites adjacent to Willow Creek, a mix of diffuse knapweed and scotch thistle was observed.
- Adjacent uplands near Massey Draw contained a mix of diffuse knapweed, leafy spurge, and Scotch thistle.
- Some isolated individual salt cedar is present along the South Platte River.
- Field bindweed was present throughout the corridor.

The noxious weed sites identified in the 2006 C-470 EA have not spread based on the findings of the 2013 field survey. Additionally, the 2013 findings are consistent with the results of the CDOT Statewide Noxious Weed Mapping results available online for 2011-2012.

Within the study corridor any additional “hot spots” or larger populations of noxious weeds will be identified prior to initiation of construction. These sites will be targeted for treatment and management action. Additional noxious weed mitigation strategies will be identified in the mitigation section.

3.7 Riparian Areas Protected by SB 40

SB 40 (33-5-101-107, CRS 1973 as amended) requires any agency of the state to obtain wildlife certification from the CPW when the agency plans construction in riparian

areas. Although SB 40 emphasizes the protection of fishing waters, it acknowledges the need to protect and preserve all fish and wildlife resources associated with streams in Colorado. In July 2013, CDOT and CPW signed a new Memorandum of Agreement that identifies some changes to the SB 40 process(CDOT 2013). The C-470 Proposed Action will adhere to these new guidelines and will implement them into the SB 40 process as the project progresses to design and construction.

The C-470 project area contains several streams that meet the criteria for jurisdiction under SB 40. The criteria used to determine study area stream eligibility included the following:

- Perennial stream represented by a solid blue line on the U.S. Geological Survey 7.5' Quad.
- Segments of ephemeral and intermittent streams providing flowing water beneficial to fish and wildlife.
- Stream segments that have 25 percent or more of the vegetation comprised of riparian vegetation such as cottonwood, willow, alder, sedges, and other plants dependent on groundwater or overbank flooding. These stream segments will be within 300 feet upstream or downstream of the project. The 300-foot distance is measured by valley length as identified in the recently issued SB 40 Guidelines.

Based on these criteria, the following five study area streams are SB 40 jurisdictional:

- South Platte River
- Big Dry Creek
- Willow Creek
- Dad Clark Gulch
- Massey Draw

Based on the project's conceptual design, potential impacts to a total of 2.771 riparian acres are anticipated at seven locations along the corridor as indicated in Table 5.

Table 5
Location and Magnitude of Potential Impacts to Riparian Areas

#	Drainage	Location	Area (acres)
1	Massey Draw	Northwestern quadrant of C-470/Kipling interchange	0.285
2	Massey Draw	Northeastern quadrant of C-470/Kipling interchange	0.608
3	Massey Draw	Between Kipling interchange and Deer Creek Pool	0.320
4	Massey Draw	Trail crossing into western portion of Chatfield State Park	0.066
5	South Platte River	North (upstream), under, and mostly south of C-470 bridges	0.978
6	Big Dry Creek	North, under, and south of C-470	0.277
7	Willow Creek	Immediately south of C-470	0.159
8	Willow Creek	North of C-470 and north of Parkway Drive	0.079
Total			2.771

4.0 CONCLUSIONS AND MITIGATION

This section summarizes the findings for biological resources and identifies mitigation for these resources. The biological resources findings and mitigation identified in this section will be included in the C-470 Revised EA.

4.1 Federal Candidate, Threatened, and Endangered Species

A total of 11 federal candidate, threatened, and endangered species - including birds, an insect, fish, and mammals - are listed within the study area counties. Of these listed species, none were identified as occurring within the proposed project area. In correspondence dated June 15, 2015, the USFWS concurred with the finding that the Proposed Action in the Revised C-470 EA was not likely to adversely affect the Preble's meadow jumping mouse, Ute ladies' tresses orchid, and Colorado butterfly plant.

Five of the listed species are in the SPWRAP. In response to the need for formal consultation for the water used from the South Platte basin, FHWA has prepared a PBA that will estimate total water usage from 2012 until 2019. The water used for this project will be reported to the USFWS at the year's end after the completion of the project as per the aforementioned consultation. As water depletion impacts to the five downstream species have already undergone consultation with the USFWS under the PBA, these five species are not discussed further in this report.

4.2 State-listed Species

A total of seven state-listed species may occur in the study area. One of these, the black-tailed prairie dog, is present in the study area and is discussed separately below. The other six species may use the study area in some capacity, either as a resident or briefly stopping in the study area during the bird migration. No mitigation is recommended for the state-listed species potentially occurring in the study area.

4.3 Black-tailed Prairie Dogs

A total of 20 black-tailed prairie dog colonies were identified in the study area. These sites and the entire corridor will be surveyed to finalize colony boundaries as the project progresses into later design and construction phases. Mitigation for impacts to black-tailed prairie dogs in the study area will follow the *2009 CDOT Impacted Black-tailed Prairie Dog Policy*.

4.4 Migratory Birds, Including Raptors

The Migratory Bird Treaty Act protects migratory birds and their nests. CDOT has developed specific guidelines to protect migratory birds during roadway construction and maintenance activities. As mitigation, CDOT will require compliance with its standard specifications, as follows:

- Standard Specifications – Section 240 Protection of Migratory Birds –Biological Work Performed by the Contractor's Biologist
- Standard Specifications – Section 240 Protection of Migratory Birds During Structure Work

No raptor nests were observed during the 2013 biological survey. The survey was conducted in July and the dense foliage on the trees prevented observation of nests. The biological survey for the 2006 C-470 EA identified the location of several raptor nests in the study corridor. Therefore, additional survey of the study area for raptor nests will be included in the C-470 Revised EA mitigation commitments.

In Colorado, migratory bird nesting generally occurs between April 1 and August 31. However, raptor nesting can be initiated as early as February 1 (Ferruginous Hawk) and restrictions to protect specific raptor species nesting starts on this date. The following migratory bird mitigation commitments are being recommended for the project:

- Pre-construction surveys for nesting birds will be completed prior to the start of construction. This includes a Burrowing Owl survey meeting the CPW Guidelines.
- When possible, vegetation shall be cleared outside of the active nesting period of April 1 through August 31. Trees and shrubs scheduled for clearing and grubbing during this period shall be surveyed for nesting birds. If active nests are located within the project area, they shall be protected.
- If a nest is identified within the project area during construction, a buffer of 50 feet will be established around the nest. This protective buffer will be a plastic fence installed around the nest. Work shall not proceed in this zone until the young have fledged or the nests are inactive.
- Ground nesting birds will be protected by conducting a survey at least seven days before ground disturbing activity is initiated. Within the work zone, the undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right-of-way line, shall be maintained at a height of six inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work.
- Raptor nest surveys will be required for the project if work is initiated between February 1 and August 31 and will be surveyed out to 0.5 mile from the construction site. If raptor nests are identified within the buffer, CPW recommended buffer zones and seasonal restriction dates will be established. As stated above, some raptors initiate nesting in February and seasonal restrictions are active starting on February 1. No work will be allowed within the buffer until the biologist has determined the young have fledged or the nest is unoccupied.
- A survey for swallows shall be completed for work being conducted on structures from April 1 through August 31. If swallow nests are present on the structure and work is planned for this time, nests should be removed before April 1. If swallows are trying to build nests between April 1 and August 31, the biologist should monitor the structure every three days. If the swallows are building a nest, they should be removed before the nest is complete.
- Installation of netting can be used to prevent nest building on structures. Netting shall consist of mesh with openings that are ¾ inch by ¾ inch or less.

4.5 Common Wildlife

Over the project reach, the amount of usable habitat would be reduced by the Proposed Action due to right-of-way acquisition (minimal), increased noise and light, and greater difficulty in crossing eight lanes of highway, compared to the four lanes that exist today.

At the South Platte River, the two existing C-470 bridges (separate bridges for eastbound and westbound traffic) would be demolished and replaced as part of the Proposed Action. The replacement bridges have been designed to improve wildlife crossing opportunities at this key location. The new opening under the highway will have more vertical and horizontal clearance, with space usable by wildlife better separated from the trail on the western bank of the river.

Existing chain-link right-of-way fences on each side of C-470 near the South Platte River help to direct wildlife to the river for crossing, especially for smaller species unable to jump the fences. The area is a known and signed wildlife crossing area with an annual average of two reported vehicle-wildlife collisions.

In addition, existing culverts in excess of 24 inches in diameter will remain to serve as small animal crossings along the C-470 corridor.

4.6 Noxious Weeds

Noxious weeds are present throughout the study area and are generally scattered in disturbed areas of the right-of-way. Some larger densities of weeds were identified in specific locations as described in Section 3.5. CDOT Standard Specifications addressing noxious weeds are identified in Sections 207, 212, and 217. These specifications require that during construction the spread of noxious weeds must be minimized through the implementation of best management practices.

For mitigation, a Noxious Weed Management Plan will be prepared prior to construction for implementation throughout the project duration. The following best management practices are designed to prevent the spread of noxious weeds:

- Weed management efforts will be coordinated with local agencies and adjacent landowners to the extent possible.
- Application of herbicides immediately adjacent to active prairie dog colonies will not be permitted.
- Herbicides specified for use near wetlands and water bodies are required when conducting noxious weed control in these areas.
- Soil disturbance will be minimized to the extent possible.
- Noxious weeds observed in and near the construction area will be treated with herbicides or mechanically removed prior to the start of construction to minimize spread of weeds during ground disturbing activities.
- All disturbed soil will be re-seeded with a certified weed-free seed mix within seven days of work during the growing season. If compost is used for soil amendment, it will be STA-certified as weed free.

- Fertilizer will not be used in wetland areas.
- Topsoil will not be imported due to the potential for spread of noxious weeds.
- During construction, all areas treated for noxious weeds during construction will be observed and noxious weeds will be treated again if they emerge.

4.7 Riparian Areas Protected by Senate Bill 40

As identified in Section 3.7, the C-470 Revised EA project area contains several SB 40 jurisdictional streams. Impacts to these areas will be avoided and minimized to the extent practicable, and mitigation measures will address any remaining impacts.

Section VI (General Conditions) of the April 2013 Guidelines agreed upon by CDOT and CPW include a list of 24 (letters A through X) Best Management Practices (BMPs) applicable in SB40 jurisdictional areas. This lengthy list is not repeated here but is incorporated by reference. For each SB40 jurisdictional area affected by the Proposed Action, CDOT will consider all of these mitigation measures and select those that are well-suited for the site, as necessary to achieve full SB 40 compliance. These specific measures will be proposed to CPW in the SB 40 application package when specific project impacts are determined in final design.

Some of the BMPs in the April 2013 Guidelines address water quality issues. In addition, the Proposed Action will include a number of BMPs developed for water quality throughout the corridor. These are likely to benefit riparian areas, SB 40 jurisdictional or not. Please see the *Water Quality Technical Report* for more information about these BMPs.

5.0 FOCUS AREA – SOUTH PLATTE RIVER BRIDGES

Section 1.2 of this Technical Memorandum noted that the Proposed Action would demolish and replace the C-470 bridges over the South Platte River, and that this location is the most environmentally sensitive and regulated locale along the project corridor. In developing the conceptual design for the new bridges, CDOT explored opportunities to minimize adverse effects and to enhance the river crossing under the bridges.

Figure 5 shows the C-470 existing bridges over the South Platte River. The eastbound bridge is in the foreground and the westbound bridge is visible behind it.
The Mary Carter Greenway Trail is visible on the left side (western bank) of this view from the southern (upstream) side of the bridges.

Figure 5
Photo of C-470 Bridges Crossing the South Platte River

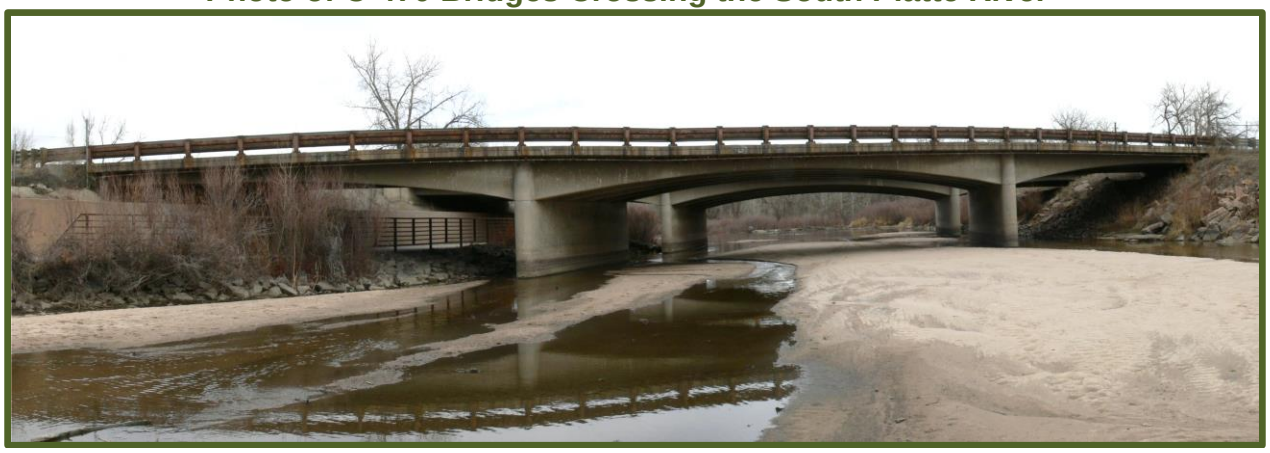
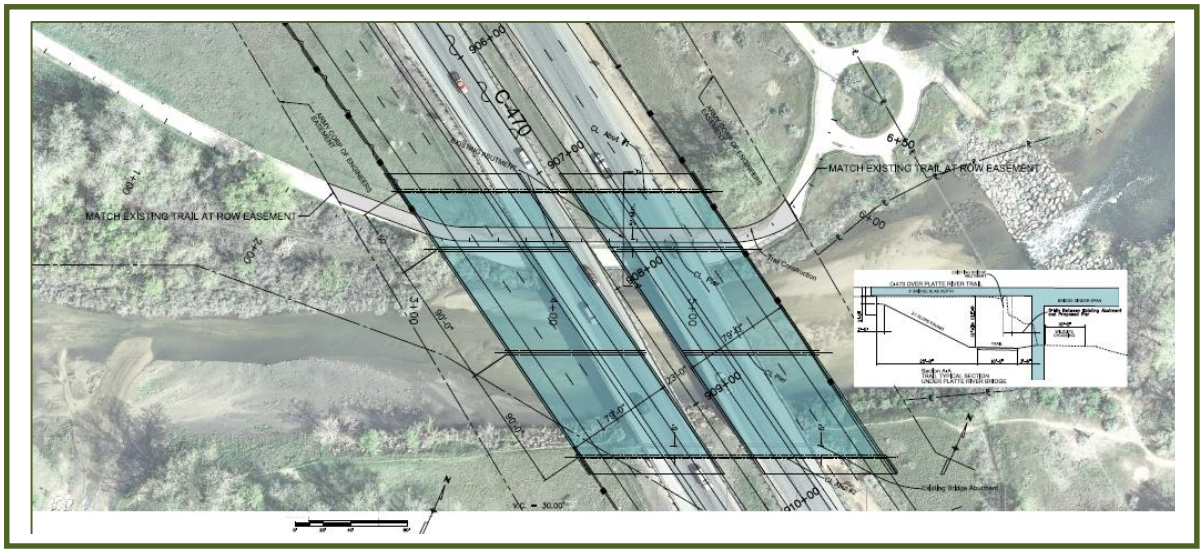


Figure 5 provides an aerial view of these bridges, with the conceptual planned new bridge design superimposed. For orientation purposes, the photo in Figure 4 was shot from the left edge of Figure 6. Some notable observations about the planned bridges are:

- Each new bridge 77 feet wide would be much wider than the existing 36-feet wide bridge it replaces.
- The inside edges of the existing and new bridges are similar locations, which means that the newly bridged area will extend upstream and downstream from the current roadway.

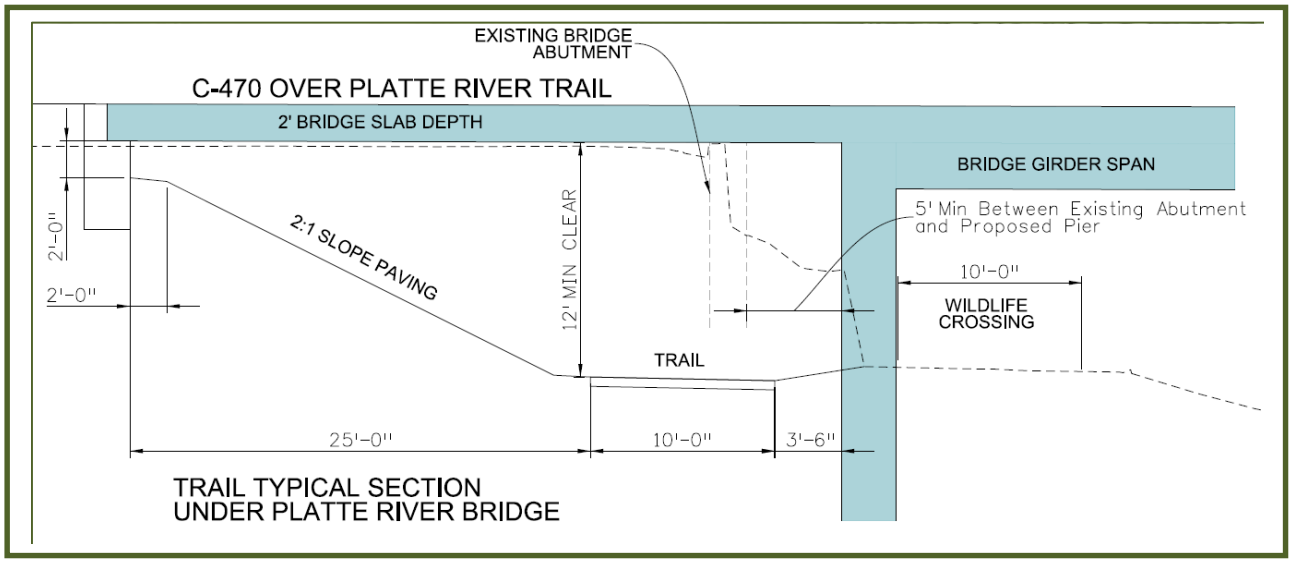
Figure 6
Aerial View of Planned New Bridge Design



With regard to the design of the new bridges, CDOT met on several occasions with representatives of the South Suburban Parks and Recreation District (SSPRD), which owns and maintains the Mary Carter Greenway Trail. SSPRD noted that the existing trail under the C-470 bridges has substandard vertical clearance and inadequate horizontal site distance. They indicated that the highway crossing would be safer for trail users and wildlife alike if there were more space under the bridge.

In response, CDOT developed a bridge design that moves the western bridge abutments farther to the west. The new design reduces the curvature of the trail under the bridge, increases the vertical clearance for bicyclists and pedestrians, and provides a wider buffer space between the trail and the river for use by wildlife. This wildlife use area will have a natural substrate and is expected to offer approximately 8 feet of vertical clearance. The typical section design for the western side of the new bridges is provided in Figure 7. This drawing is a side view, somewhat similar to the photo provided in Figure 4.

Figure 7
Typical Design Section for Trail and Wildlife Crossing under C-470 South Platte River Bridges



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APPENDIX

United States Department of the Interior

FISH AND WILDLIFE SERVICE
COLORADO FIELD OFFICE/LAKEWOOD
P.O. BOX 25486, DENVER FEDERAL CENTER
DENVER, COLORADO 80225-0486

IN REPLY REFER TO
ES/CO: CDOT
TAILS: 06E24000-2015-I-0741

JUN 16 2015

Francesca Tordonato
Colorado Department of Transportation
425A Corporate Circle
Golden, Colorado 80401

Dear Ms. Tordonato:

On August 15, 2013, the U.S. Fish and Wildlife Service (Service) concurred with your determination that the impacts resulting from reconstructing C-470 between I-25 and Kipling Parkway in Arapahoe, Douglas, and Jefferson Counties, Colorado, are not likely to adversely affect the Preble's meadow jumping mouse (*Zapus hudsonius preblei*), the Ute ladies'-tresses orchid (*Spiranthes diluvialis*), or the Colorado butterfly plant (*Gaura neomexicana* ssp. *coloradensis*) (2013-I-0687). We based this determination on the project's location within areas that have been block-cleared for these species or on the lack of suitable habitat in areas outside the block-cleared areas. Our review was performed consistent with our authority under the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 *et seq.*). No critical habitats have been designated in the project area; therefore, none will be affected.

On June 5, 2015, we received your request to extend the above clearance because the project has not yet commenced. There have been no changes to the project description, the site conditions, or listed species or designated critical habitats; therefore, we expect the impacts from the project to be discountable and insignificant.

Given that the project description and habitat conditions have not changed, the Service continues to find your determination acceptable and agrees that the project will not likely adversely affect the Preble's meadow jumping mouse, the Ute ladies'-tresses orchid, or the Colorado butterfly plant.

Please note that reinitiation of consultation will be required if:

1. New information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion;
2. The action is subsequently modified in a manner that causes an adverse effect to the listed species or critical habitat that was not considered in this opinion; or
3. A new species is listed or critical habitat designated that may be affected by the action.

If the proposed project has not commenced within one year, please contact the Colorado Field Office to request an extension.

We appreciate your submitting this report to our office for review and comment. If the Service can be of further assistance, please contact Alison Deans Michael of my staff at (303) 236-4758.

Sincerely,

for Drue L. DeBerry
Acting Colorado Field Supervisor

cc: CDOT, HQ (Jeff Peterson)
CDOT, R1 (Jon Chesser)
Wilson and Company (Doug Eberhart)
Michael

Ref: Alison\H:\My Documents\CDOT 2007+\Region 1\C-470_EA_revision\C-470_EA_revision_PMJM_CBP_ULTO_concur_extension.docx